

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Currently Amended): A spark plug comprising:

a central electrode;

a metal shell;

an alumina ceramic insulator disposed between the center electrode and the metal shell, wherein at least part of the surface of the insulator is covered with a glaze layer comprising oxides,

wherein the glaze layer comprises:

1 mol% or less of a Pb component in terms of PbO;

35 to 55 mol% of a Si component in terms of SiO₂;

15 to 35 mol% of a B component in terms of B₂O₃;

5 to 20 mol% of a Zn component in terms of ZnO;

0.5 to 20 mol% in total of at least one of Ba and Sr components in terms of BaO and SrO, respectively; and

~~10~~ 11 to 15 mol% in total of at least one of alkaline metal components of Na, K, and Li in terms of Na₂O, K₂O, and Li₂O, respectively;

wherein the glaze layer contains the Li component and at least two alkaline metal components among the Li, Na and K components, and satisfies the relationship:

$0.2 < \text{NLi}_2\text{O}/\text{NR}_2\text{O} < 0.5$ when the at least two alkaline metal components are taken as R, NR_2O is a total mol content of the at least two alkaline metals in terms of a composition formula R_2O , and NLi_2O is a mol content of the Li component in terms of Li_2O .

Claim 2 (Currently Amended): A spark plug comprising:

a central electrode;

a metal shell;

an alumina ceramic insulator disposed between the center electrode and the metal shell, wherein at least part of the surface of the insulator is covered with a glaze layer comprising oxides,

wherein the glaze layer comprises:

1 mol% or less of a Pb component in terms of PbO ;

35 to 55 mol% of a Si component in terms of SiO_2 ;

15 to 35 mol% of a B component in terms of B_2O_3 ;

5 to 20 mol% of a Zn component in terms of ZnO ;

0.5 to 20 mol% in total of at least one of Ba and Sr components in terms of BaO and SrO , respectively; and

~~10~~ 11 to 15 mol% in total of at least one of alkaline metal components of Na, K, and Li in terms of Na_2O , K_2O , and Li_2O , respectively;

wherein the glaze layer contains the K component and at least two alkaline metal components among the Li, Na, and K components, and satisfies the relationship: $0.4 < \text{NK}_2\text{O}/\text{NR}_2\text{O} < 0.8$ when the at least two alkaline metals are taken as R, NR_2O is a total mol content of the at least two alkaline metal components in terms of a composition formula R_2O , and NK_2O is a mol content of the K component in terms of K_2O .

Claim 3 (Cancelled).

Claim 4 (Previously Presented): The spark plug according to claim 1, wherein the glaze layer further comprises a B component and a Zn component in terms of B_2O_3 and ZnO , respectively, in a total mol amount of $\text{N}(\text{B}_2\text{O}_3 + \text{ZnO})$, the glaze layer further comprises at least one of: an alkaline earth metal component RE, RE being at least one selected from Ba, Mg, Ca and Sr, in terms of a composition formula REO; and an alkaline metal component R, R being at least one selected from Na, K and Li, in terms of a composition formula R_2O , in a total mol amount of $\text{N}(\text{REO} + \text{R}_2\text{O})$, and the ratio: $\text{N}(\text{B}_2\text{O}_3 + \text{ZnO})/\text{N}(\text{REO} + \text{R}_2\text{O})$ is 1.5 to 3.0.

Claim 5 (Original): The spark plug according to claim 1, wherein the glaze layer contains 8 to 30 mol% in total of the Zn component and the at least one of Ba and Sr components in terms of ZnO , BaO and SrO , respectively.

Claim 6 (Original): The spark plug according to claim 1, wherein the glaze layer further comprises 0.5 to 5 mol% in total of at least one of Zr, Ti, Mg, Bi, Sn, Sb and P in terms of ZrO_2 , TiO_2 , MgO , Bi_2O_3 , SnO_2 , Sb_2O_5 and P_2O_5 , respectively.

7. (Currently Amended) The spark plug according to claim 1, which ~~comprises~~ **comprises** one of:

a terminal metal fixture and the center electrode as one body, in a through hole of the insulator; and a terminal metal fixture provided separately from the center electrode via a conductive bonding layer, in a through hole of the insulator, and

an insulation resistant value is 200 M Ω or more, which is measured by keeping the whole of the spark plug at about 500°C and passing a current between the terminal metal fixture and the metal shell via the insulator.

Claim 8 (Original): The spark plug according to claim 1, wherein the insulator comprises an alumina insulating material containing 85 to 98 mol% of an Al component in terms of Al_2O_3 , and the glaze layer has an average thermal expansion coefficient at the temperature ranging 20 to 350°C of $5 \times 10^{-6}/^\circ\text{C}$ to $8.5 \times 10^{-6}/^\circ\text{C}$.

Claim 9 (Original): The spark plug according to claim 1, wherein the glaze layer has a softening point of 600 to 700°C.